NRC·CNRC

Research and Technology **in Action**

NRC Annual Report **2014-2015**

National Research Council Canada
Conseil national de recherches Canada

Canada

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ISBN NR1-1

Publication Date: November 2015

National Research Council Canada, 1200 Montreal Road, Ottawa, Ontario K1A 0R6

1-877-NRC-CNRC • info@nrc-cnrc.gc.ca • www.nrc-cnrc.gc.ca

President's message

This is a very exciting time for NRC, with many new and inspiring initiatives on the horizon. As NRC approaches its centennial in 2016, we have been steadfast in engaging Canadian industry as a leading engine for innovation, providing unique and novel solutions that contribute to the success of businesses across the country.

In support of our goal to help innovative Canadian companies become more successful, we continue to solidify our role as the Government of Canada's premier research and technology organization (RTO) by fulfilling our commitment to invest in industry-driven research and development (R&D) programs that have tangible economic and societal impacts for Canada and Canadians.

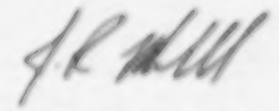
This past year has seen the announcement of nine new research programs at NRC that are taking us in new directions while continuing to boost productivity for Canadian enterprises. Through these initiatives, our world-class experts and multi-disciplinary teams continue to provide unmatched support that is responsive to the needs of both traditional and emerging industry sectors.

We have also seen an increase in opportunities to expand relationships with existing clients and to develop new partnerships this past year. Record numbers of firms across Canada have accessed our Industrial Research Assistance Program (IRAP) for business and financial support, while our Canada Accelerator and Incubator Program (CAIP) has helped to identify new and outstanding Canadian businesses with sustainable, high-growth potential. We have equally extended our reach internationally, leveraging our association with EUREKA to position Canada as a top performer among international R&D networks.

Important new federal investments in science and innovation infrastructure came to fruition this year, enabling Canada to participate in the Thirty Meter Telescope, to increase support for Canada's National Laboratory for Particle and Nuclear Physics (TRIUMF) and to build new facilities for the Factory of the Future program.

We have significantly upgraded our IT networks and systems to improve security over our information assets. We have also taken steps to increase awareness and strengthen our culture to ensure that our behaviours and practices maintain a safe and secure workplace.

As we move forward, NRC is poised to take a leadership role in ensuring that companies of all sizes have access to the state-of-the-art facilities and the business and technical services that they require to help them further innovate and de-risk their investments in research and development. With this in mind, we remain dedicated to providing leading-edge and responsive market-focused solutions at home and abroad that will help Canada increase its economic competitiveness and sustain its prosperity. That is our commitment.



John R. McDougall, P. Eng.
President

Canada's **"go-to" RTO**

NRC groups its activities among four business lines, focusing them on areas that are of most value to Canada and Canadian industry.

New strategic research partnerships include co-development of a new treatment against aggressive brain cancers with biOasis Technologies and KalGene Pharmaceuticals, and a joint program with Defence Research and Development Canada (DRDC) and industry partners to develop next-generation products for the international security and defence markets. NRC worked with Canadian companies on projects worth over $46M through the international network for industrial R&D known as EUREKA.

NRC supports Canadian firms in moving innovative ideas and technologies to market faster and with better results in such areas as marine vehicles, biologics, advanced materials, transportation and security technologies. Our technical and advisory services continue to provide business-focused solutions, which this year have included the commercialization of novel and award-winning semiconductor inks developed with Raymor Industries, supporting the commercial eployment of Logiag's laser-based soil-testing technology, and assisting TeraXion Inc. to develop an ultra-fast transmitter for fibre optic networks, ultimately establishing them as a major player in global telecommunications.

This year, the Industrial Research Assistance Program (IRAP) worked with over 10,000 SMEs, providing technical and business advice, and funding for innovation projects. Overall, this created a growth of 17% in our clients' revenues. Clients reported a variety of other impacts, including increased exports, tripling of sales volumes, attracting venture capital, company growth, and accelerated patenting of their technologies.

In addition to our announced participation in the international Thirty Meter Telescope Project and our launch of the Factory of the Future program, NRC continues to manage and support state-of-the-art infrastructure such as wind tunnels, water basins, laboratories and pilot plants, and to support innovation in Canada.

Four business lines with impact

Our services and expertise are closely aligned with the needs of our clients and partners, and grouped along four business lines to ensure a high return on investment in Canada.

Strategic Research & Development	**Research that accelerates and de-risks innovation and commercial deployment in areas of national priority, in partnership with industry, government and other research organizations.**
Technical and Advisory Services	**Assisting clients in solving immediate technical problems through the delivery of specialized fee-for-service support (e.g. testing and certifications, calibration, prototyping, demonstrating, consulting).**
Industrial Research Assistance Program	**Helping small and medium-sized enterprises (SMEs) in Canada to grow and succeed by providing advisory and financial support through the Industrial Research Assistance Program (IRAP). IRAP also serves as a referral portal for SMEs into NRC's full suite of programs and services.**
Scientific Infrastructure	**Enabling clients to effectively use some of Canada's most specialized scientific infrastructure, ensuring that access is fair and based on merit.**

Year in **review**

Our clients remain top of mind. And this year was no exception. Our combined strategic R&D, technical capabilities and specialized infrastructure provided a powerful mix of research and technology solutions for our clients.

By drawing on our multidisciplinary expertise and know-how from across NRC, we helped industry to de-risk the development of innovative ideas, reduce start-up costs and shorten time to market. No other Canadian organization can match our capabilities.

How NRC helped clients

Increased knowledge/ability to plan and execute R&D: **55%**

Accelerated technology development: **41%**

Improved product/service: **33%**

Launched new product/service: **32%**

Increased competitive advantage: **36%**

Improved manufacturing: **14%**

Increased sales: **11%**

Increased R&D expenditures: **53%**

Created new jobs: **14%**

Increased valuation: **9%**

Source: 2014-15 NRC Client Satisfaction Survey

Our unique expertise and know-how remains the main reason why our clients choose to work with us.

What was our competitive advantage?

Expertise: **60%**

Past experience with us: **48%**

Trusted scientific methods: **41%**

Most comprehensive solution: **26%**

Common objectives: **21%**

Price: **14%**

Revenue by type

Technical services: **52%**

Research services: **32%**

Intellectual property, royalties and fees: **5%**

Rentals: **6%**

Sale of goods and information products: **3%**

Other: **2%**

91%
said they were satisfied with our services

74%
said we positively impacted their organization

NRC in action
for Canadian industry

New wound diagnostic tool goes beyond skin deep

Shining new light on tissue health

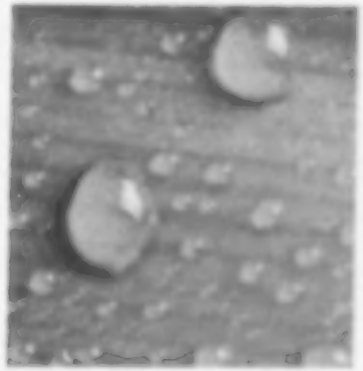
For serious skin wounds, their ability to heal is mostly dependent on healthy oxygen levels and a strong blood supply. While measuring this is typically done through a visual assessment of the wound, a new imaging system from Calgary's Kent Imaging now allows medical practitioners to "see" below the skin's surface.

Using technology licensed from NRC, the "Tissue Viability System" (TVS) uses near-infrared light to quickly gauge wound health without requiring any invasive procedures.

By focusing specifically on the interior of a wounded area, the TVS offers a completely new way for thousands of doctors around the world to diagnose wound health, all within just a few seconds.

"NRC researchers were exceedingly helpful in making their research understandable and applicable to my market's specific needs."

Don Chapman,
CEO, Kent Imaging



"From the very start, we knew we needed to surround ourselves with the best minds to bring this to market, so we turned to NRC."

Alakh Prasad,
President and CEO Quadrogen Power Systems Canada

Canadian technology clears the air with renewable biogas

A fresh take on clean energy

British Columbia-based Quadrogen Power Systems is breathing fresh air into the way the world treats its agricultural, forestry and livestock waste. While older systems remove only a small number of the harmful impurities in biogas, their new system removes virtually all of them, producing the cleanest biogas on the market.

To do so, Quadrogen connected with NRC's bioenergy experts to tackle some of their biggest technical hurdles and to bring their technology to market within just three years.

Quadrogen's first Canadian installation—the first of its kind to simultaneously produce electricity, heat, food-grade CO_2 and hydrogen—now has the potential to be a game-changer in the global landfill gas market.

Building bridges that span a lifetime

Paving the way to concrete results

As roads and bridges in Canadian cities suffer from the effects of harsh weather, heavy traffic, road salt and acid rain, a new cross-border bridge in Cornwall, Ontario stands strong.

Built from a new class of concrete, the deck of the Canal Bridge—part of the Seaway International Bridge system—is expected to require significantly less maintenance than most of the other 80,000 bridges across Canada, ensuring safe and efficient travel for the more than 2.3M drivers who use it each year.

With cost and technical advantages over other high performance concrete on the market, the new concrete developed by NRC is now being considered for projects by other bridge owners across Canada.

"NRC provides an important engineering service to our country that reaches across borders."

Glenn Havens,
Senior Vice-president,
Federal Bridge Corporation Limited

A golden future for Canadian solid honey producer

The sweet taste of a successful partnership

Breaking a jar of liquid honey in his backpack while hiking got John Rowe thinking that honey should really be available in solid form. Since no one had ever invented such a product, he spent the next decade researching and developing the planet's first cube of solid honey.

However, manufacturing and marketing this newly invented product posed immense challenges and unforeseen hurdles. It was at this point that Rowe reached out to NRC whose support took various forms, including advisory services, laboratory analyses and market intelligence.

Island Abbey Foods now sells a range of products under its own handcrafted brand and manufactures them for partners around the world.

"NRC provides an incredible competitive advantage for Canadian businesses."

John Rowe,
CEO, Island Abbey Foods

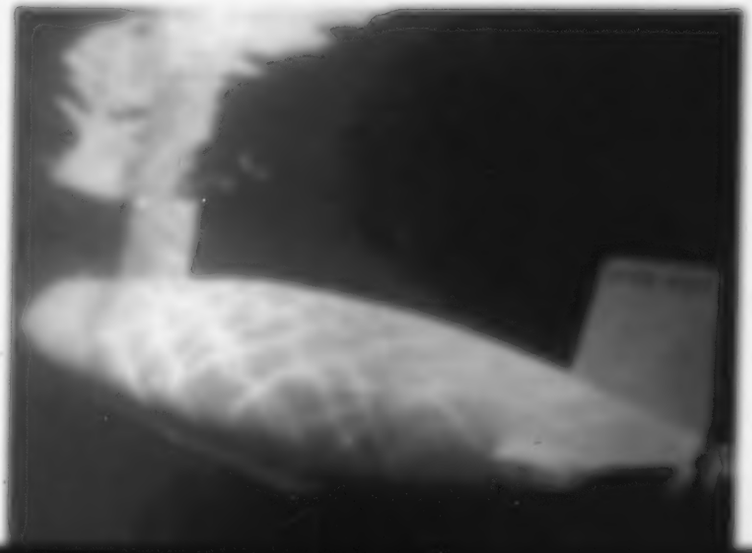
New autopilot technology powers modernized submarines

Navigating new waters with the Royal Canadian Navy

While submarines are built for longevity, they still require regular upgrades to remain operationally up to date.

To modernize selected vessels, the Department of National Defence enlisted NRC's help to design, build and test a new state-of-the-art autopilot control system, which, when engaged, automatically adjusts and compensates for any disturbance that could affect the submarine's set course through the water.

The use of NRC's advanced modelling facility also helped the teams to assess how well the system worked and to move into production with confidence before taking the project into the open waters.



Breaking down brain barriers one molecule at a time

Shedding light on the mysteries of brain disease

For the past six years, scientists, medical specialists and researchers at NRC have been developing a series of small antibodies that can infiltrate the blood-brain barrier in order to shuttle in therapeutic molecules.

This important Canadian research breakthrough may have found the key to delaying the progression of brain diseases such as Alzheimer's, Multiple Sclerosis (MS) and Parkinson's.

In collaboration with Biogen, a biotechnology company with a long history of developing MS therapeutics, it is anticipated that this research will lead to the creation of more therapeutics for those suffering from brain disease as well as for the aging population.

"*The NRC Biogen relationship has been a mutually successful handshake with complementary capabilities on each side.*"

Siobhan Pennington,
Director, Biogen

Canada's Aphid helicopter soars to new heights

Staying on course with new UAV technology

As the demand for unmanned aerial vehicles (UAVs) soars, so too will the need for increasingly complex control systems, navigation equipment and communication technologies.

To develop such robust systems, Defence Research and Development Canada (DRDC) enlisted the help of experts from NRC to develop and test new sensors, electronics and computer programs to keep UAVs in the air and on course.

After six years of design and development, the result is a computer-controlled flight system that will help the Canadian aerospace sector to land new opportunities that are certain to take off.

"NRC provided the ideal solution to advance our research and development needs."

Michael Trentini,
Group Head, Autonomous Systems Operations, Defence Research and Development Canada

Sailing through nature's obstacle course

Assuring safe passage for Acadian fishing vessels

The Shippagan Gully in northeastern New Brunswick is an economically valuable, time saving route that many fishing vessels avoid due to a combination of high winds, rough seas and accumulated sand that leaves the passage too narrow and too shallow to pass through safely.

To improve the navigation conditions in the channel, the Department of Fisheries and Oceans turned to NRC's experts who applied their expertise and numerical modelling tools to successfully simulate and forecast the performance of various interventions to maintain a clear passage.

Based on this research, new measures are being developed that will ensure safer, easier navigation for vessels sailing through the gully. Ultimately, a time and cost saving solution for Canadian fishers.

"This is a good-news solution that should have a big impact on the local economy."

Alain Drouin,
Coastal Engineer, Public Works and Government Services Canada

Remaining on the leading edge of international security knowledge

Solving the critical security issues facing most enterprises

Manitoba-based Seccuris has grown exponentially from the small company that started in 1999. Today, it is the North American leader in Enterprise Security Architecture and Information Assurance Integration.

With support and guidance from NRC's Industrial Research Assistance Program (IRAP), Seccuris designed the OneStone™ Information Assurance Portal, a cloud-based platform that protects clients from external and internal threats through reliable 24/7 remote monitoring and cybersecurity management that provides immediate benefits and is easy to deploy.

Moving forward, Seccuris will continue to meet the information assurance challenges of security risks that impact organizations and their customers throughout the United States, Canada, and around the world.

"Because of the work we're doing, and with IRAP's assistance on our projects, we're able to provide security solutions to clients when and where they need them most."

Michael Legary,
Chairman and Chief Strategy Officer, Seccuris Inc.

International recognition for improved virtual environments

Breaking new ground with state-of-the-art simulators

Virtual operations simulation is an important tool that helps to eliminate the risks associated with operational manoeuvres in the heavy machinery industry.

CM Labs Simulations Inc. is a Montreal-based company that offers simulation services and products in virtual environments, working in the offshore, port, construction, defence, energy and robotics fields. With support and expertise from NRC's Industrial Research Assistance Program (IRAP), this forward-thinking company completed the design of an advanced, innovative simulator that provides a highly accurate imitation of the real-life movements of excavators and bulldozers.

IRAP's financial support for research and development also enabled CM Labs to improve its other simulators, including those currently used for space missions to the moon and Mars. Moving forward, CM Labs hopes to tap into even more markets with the goal of becoming the worldwide leader in simulation, both on land and at sea.

"NRC provided the ideal solution to advance our research and development needs."

Sylvain Lagacé,
Vice President, CM Labs

Global **expertise**

Strengthening Canadian innovation and expertise through strategic global partnerships

NRC has boosted the visibility of Canadian firms on the international stage through global engagement and strategic alliances that drive innovation and economic growth.

NRC's efforts give Canadian companies access to critical partners, technology and resources in important economies.

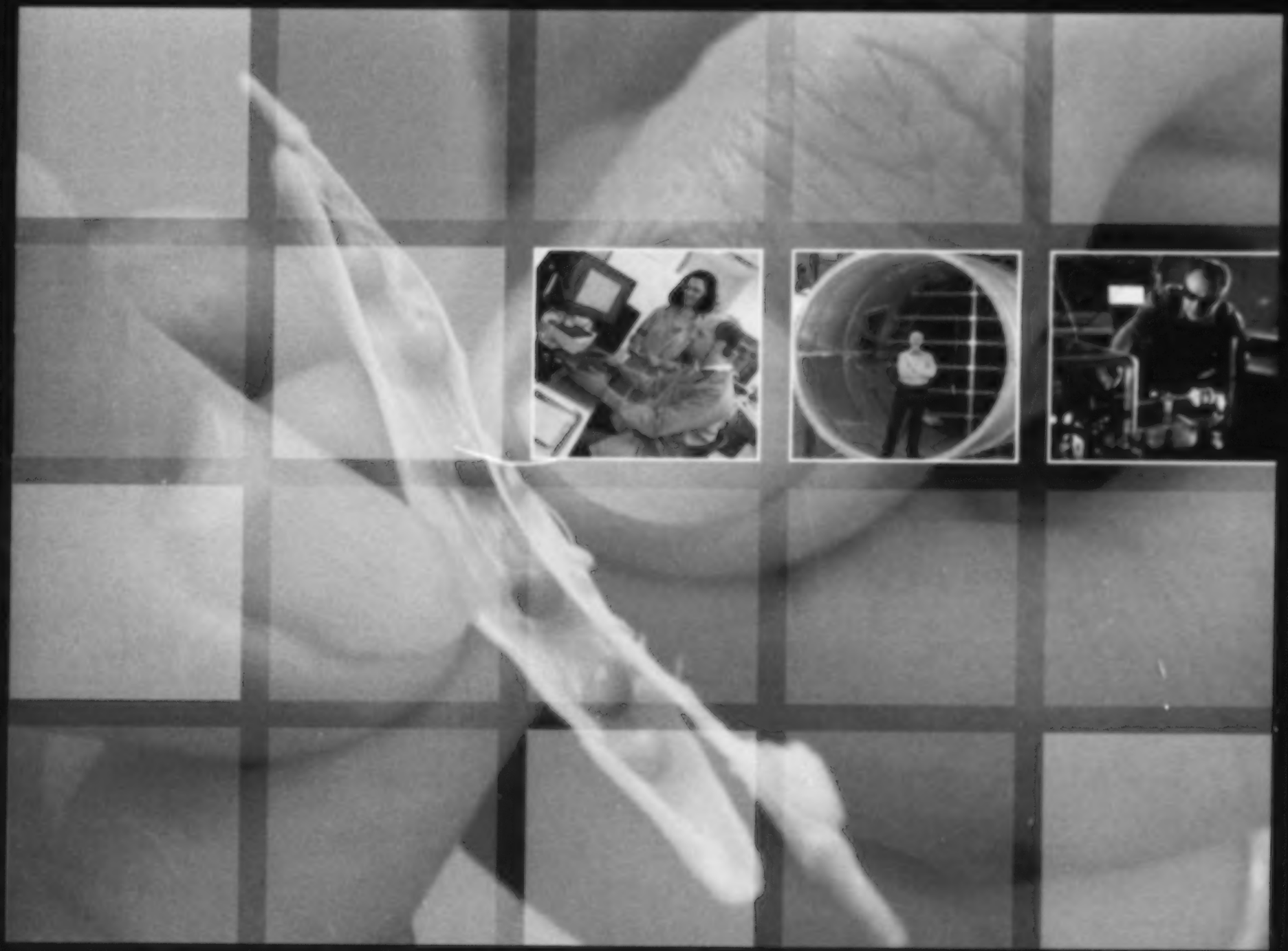
Partnerships begin at home, with other Canadian stakeholders, and extend broadly to other RTOs, educational institutions, economic development agencies and, among many others, research powerhouses such as the National Aeronautics and Space Administration (NASA). In May 2014, for example, NRC joined forces with NASA and the German Aerospace Center (DLR) to study the effects of burning alternative fuels in jet engines. NRC's work with these top-level partners showcased NRC's expertise and unique testing capabilities. It also advanced the discovery of solutions which will greatly increase the efficiency of the global aerospace industry.

The effects of NRC's international engagement are far-reaching, generating benefits to researchers and industry alike by opening doors to real-time opportunities and continued partnership. For example, work that began in 2011, between NRC and other key Canadian stakeholders, European partners and the European Union led to the creation of the Canadian Networking Aeronautics Program with Europe (CANNAPE). In turn, CANNAPE then led (in 2014) to the first Canada-EU Coordinated Call for Research Projects in Aeronautics under the EU's $80 billion Euro Horizon 2020 program. The coordinated call will allow for collaborative multi-partner projects between Canadian industry, research organizations and universities and the Economic Union's aeronautics community.

Canada's associate membership in EUREKA (a pan-European network covering approximately 40 different economies) is another example of global engagement that enhances the productivity and competitiveness of Canadian industry.

Canada's participation in the network—delivered through NRC—gives researchers and businesses the potential to access key foreign markets, greater capital, global value chains, and new resources such as specialized knowledge, technology and facilities. This allows small or medium-sized enterprises (SMEs) to de-risk their R&D pursuits.

In 2014-2015, EUREKA-Canada opportunities led to 22 new projects involving 21 Canadian SMEs, one large firm, one municipality and two universities, with partners from Finland, France, Germany, Israel, Italy, Spain, Turkey and the United Kingdom. These new collaborative projects (18 of which are being led by Canadians) are in information and communications technologies (ICT), manufacturing, transportation, materials and medical technologies with a combined value of approximately C$30M.



Research divisions
designed for success

NRC is comprised of integrated R&D divisions that are guided by advisory bodies composed of industry leaders.

This structure provides NRC with the ability to assemble cross-disciplinary teams and to quickly respond to emerging markets and industry needs.

Emerging Technologies

The Emerging Technologies division is focused on understanding, anticipating and building capacity to address emerging markets essential to Canada's future needs, including mandated activities in astronomy and metrology.

Engineering

The Engineering division is focused on offering engineering solutions for sector-based industrial growth in Canada.

Life Sciences

The Life Sciences division is focused on applying technologies to market opportunities that address such issues as aging population and sustainability.

Under these umbrella divisions, our consolidated portfolios are each focused on key industrial sectors.

They represent areas of strategic importance and economic value for Canada, where technology intensity is high and where our R&D capabilities can have a significant impact on industry's productivity and competitiveness.

- Information and Communications Technologies
- Measurement Science and Standards
- NRC Herzberg Astronomy and Astrophysics
- Security and Disruptive Technologies

- Aerospace
- Automotive and Surface Transportation
- Construction
- Energy, Mining and Environment
- Ocean, Coastal and River Engineering

- Aquatic and Crop Resource Development
- Human Health Therapeutics
- Medical Devices

Emerging Technologies

NRC research programs are the cornerstone of our activities

Designed to meet identified industry needs and draw upon resources from across the organization, our research programs are managed to ensure that they achieve clearly defined value propositions.

These research programs are industry-driven and multi-disciplinary, with the critical mass to address the technology needs of existing and emerging sectors.

Our programs deliver economically viable and near-market ready solutions to technical and productivity challenges affecting Canadian industry.

Emerging Technologies

Understanding, anticipating and building capacity to address emerging markets essential to Canada's future needs, including mandated activities in astronomy and metrology.

- Advanced Photonic Components
- Astronomy Technology
- Gallium Nitride (GaN) Electronics
- Learning and Performance Support Systems
- Measurement Science for Emerging Technologies
- Metrology for Industry and Society
- Multimedia Analytic Tools for Security
- National Institute for Nanotechnology
- Optical Astronomy
- Printable Electronics (Flagship)
- Radio Astronomy
- Scientific Support for the National Measurement System

Announced in 2014–2015

- Quantum Photonic Sensing and Security
- Security Materials Technologies

Engineering

Engineering

Offering engineering solutions for sector-based industrial growth in Canada.

- Advanced Manufacturing and Design Systems
- Aeronautical Product Development Technologies
- Aeronautics for the 21st Century
- Air Defence Systems
- Bioenergy Systems for Viable Stationary Applications
- Building Regulations for Market Access
- Civilian Unmanned Aircraft Systems
- Critical Concrete Infrastructure
- Energy Storage for Grid Security and Modernization
- High-efficiency Mining
- High-performance Buildings
- Industrial Biomaterials (Flagship)
- Lightweighting of Ground Transportation Vehicles
- Mid-rise Wood Buildings
- Rail Vehicle and Track Optimization
- Reducing Aviation Icing Risk
- Vehicle Propulsion Technologies
- Working and Travelling on Aircraft

Announced in 2014-2015:

- Arctic
- Fleet Forward 2020
- Marine Infrastructure, Energy and Water Resources
- Marine Vehicles

Life Sciences

Life Sciences

Applying technologies to market opportunities that create prosperity and improve quality of life in Canada.

- Algal Carbon Conversion (Flagship)
- Bio-based Specialty Chemicals
- Canadian Wheat Improvement (Flagship)
- Health Technologies
- Natural Health Products

Announced in 2014-2015:

- Biologics and Biomanufacturing
- Therapeutics Beyond Brain Barriers
- Vaccines

Council Members

(2014-2015)

John R. McDougall, *President*

Thomas (Tom) Jenkins

Carolyn Cross

Karimah Es Sabar

Nannette de Gaspé Beaubien

Maurice Guitton

Jay Josefo

Raymond Leduc

Stephen Mooney

Lois Scott

Peter Vanexan

Senior Executive Committee

(2014-2015)

John R. McDougall, *President*

Pam Bjornson, *Acting Executive Vice President*

Bogdan Ciobanu, *Vice-President, Industrial Research Assistance Program (IRAP)*

Isabelle Gingras, *Vice-President, Human Resources*

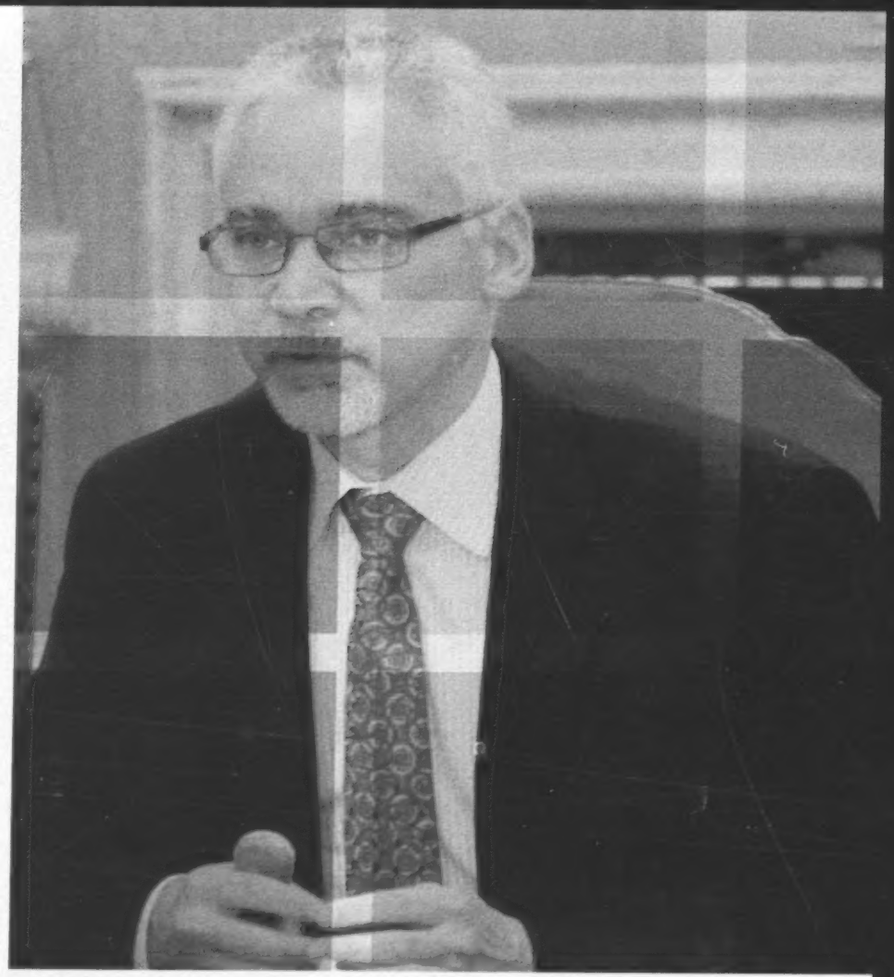
Patricia Mortimer, *Executive Vice-President and Secretary General*

Michel Piché, *Vice-President, Corporate Management and Chief Financial Officer*

Dr. Ian Potter, *Vice-President, Engineering and Business Management*

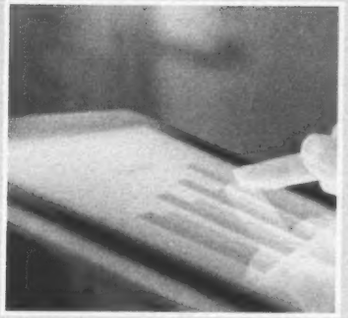
Dr. Roman Szumski, *Vice-President, Life Sciences*

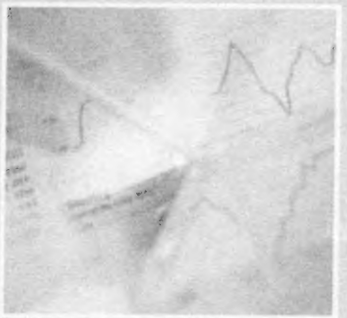
Dr. Dan Wayner, *Vice-President, Emerging Technologies*



For more information about NRC, please visit: www.nrc-cnrc.gc.ca

Financial summary





Consolidated Statement of Operations and Net Financial Position

For the year ended March 31

(in thousands of dollars)

	2015	2014
FINANCIAL ASSETS		
Due from Consolidated Revenue Fund	315,929	271,642
Accounts receivable (Note 4)	36,754	30,195
Inventory for resale	3,877	2,932
Cash and investments (Note 5)	3,099	2,436
Total gross financial assets	**359,659**	**307,205**
FINANCIAL ASSETS HELD ON BEHALF OF GOVERNMENT		
Accounts receivable (Note 4)	(68)	(108)
Total financial assets held on behalf of Government	**(68)**	**(108)**
Total net financial assets	**359,591**	**307,097**
LIABILITIES		
Accounts payable and accrued liabilities (Note 6)	178,698	141,150
Vacation pay and compensatory leave	28,883	28,978
Lease inducements	37,850	40,398
Deferred revenue (Note 7)	9,136	9,880
Employee future benefits (Note 8)	36,446	52,163
Total liabilities	**291,013**	**272,569**
Departmental net financial assets	**68,578**	**34,528**
NON-FINANCIAL ASSETS		
Prepaid expenses	9,631	11,170
Endowment fund investments (Note 9)	5,006	4,880
Inventory for consumption	4,014	4,005
Tangible capital assets (Note 10)	512,941	519,896
Total non-financial assets	**531,592**	**539,951**
Departmental net financial position	**600,170**	**574,479**

Contractual obligations (Note 11)
Environmental liabilities (Note 12)
Contingent liabilities (Note 13)

The accompanying notes form an integral part of these consolidated financial statements.

John R. McDougall, P.Eng.
President

Ottawa, Canada
June 25, 2015

Michel Piché, M.P.A.,CPA, CMA, CIA
Vice President, Corporate Management and Chief Financial Officer

Consolidated Statement of Change in Departmental Net Financial Assets

For the year ended March 31

(in thousands of dollars)

	2015 Planned Results	2015	2014
Net revenue (cost) of operations after government funding and transfers	**(4,904)**	**25,691**	**23,152**
CHANGE DUE TO TANGIBLE CAPITAL ASSETS			
Acquisition of tangible capital assets	(56,242)	(49,977)	(58,737)
Amortization of tangible capital assets	66,500	56,786	58,493
Proceeds from disposal of tangible capital assets	–	309	1,665
Net loss on disposal capital assets including adjustments	–	643	2,380
Transfers from/to other government departments (Note 16)	–	(93)	168
Other adjustments	–	(713)	(461)
Total change due to tangible capital assets	**10,258**	**6,955**	**3,508**
Change due to inventory for consumption	**–**	**(9)**	**370**
Change due to endowment fund investments	**(100)**	**(126)**	**(68)**
Change due to prepaid expenses	**–**	**1,539**	**1,713**
Net change in departmental net financial assets	**5,252**	**34,050**	**28,675**
Departmental net (financial assets) – Beginning of year	**34,528**	**34,528**	**5,853**
Departmental net (financial assets) – End of year	**39,780**	**68,578**	**34,528**

The accompanying notes form an integral part of these consolidated financial statements.

Consolidated Statement of Operations and Departmental Net Financial Position

For the year ending March 31

(In thousands of dollars)

	2015 Planned Results	2015	2014
EXPENSES			
Technology Development and Advancement	367,582	336,160	322,944
Industrial Research Assistance Program	283,030	269,267	281,744
Science Infrastructure and Measurement	105,715	108,267	101,316
Internal Services	242,056	254,134	227,513
Total expenses	**998,383**	**965,828**	**933,517**
REVENUES			
Research services	69,874	46,205	50,067
Technical services	102,203	75,029	77,802
Intellectual property, royalties and fees	10,476	7,498	9,357
Sales of goods and information products	5,440	4,168	5,878
Rentals	6,541	5,604	5,751
Grants and contributions	2,766	2,414	2,940
Lease inducement revenue	2,548	2,548	2,548
Other	360	3,332	2,003
Revenues earned on behalf of Government	(150)	(72)	(313)
Total revenues	**199,058**	**146,723**	**156,083**
Net cost of operations before government funding and transfers	**799,325**	**819,105**	**777,434**
GOVERNMENT FUNDING AND TRANSFERS			
Net cash provided by Government	747,214	702,586	714,580
Change in due from the Consolidated Revenue Fund	–	44,287	(19,078)
Services provided without charge by other government departments and agencies (Note 14)	46,205	49,579	44,998
Transfer of transition payments for implementing salary payments in arrears (Note 15)	–	(11,358)	–
Transfers from/to other government departments (Note 16)	–	93	(180)
Net revenue (cost) of operations after government funding and transfers	**(6,906)**	**25,681**	**23,152**
Departmental net financial position – Beginning of year	**578,479**	**578,479**	**555,327**
Departmental net financial position – End of year	**569,573**	**600,160**	**578,479**

Segmented information (Note 17)

The accompanying notes form an integral part of these consolidated financial statements.

Consolidated Statement of Cash Flows

For the year ending March 31

(In thousands of dollars)

	2019	2018
OPERATING ACTIVITIES		
Net cost of operations before government funding and transfers	(616,145)	(557,168)
Non-cash items:		
Amortization of tangible capital assets	(56,780)	(58,455)
Transfers from/to other government departments	–	12
Net loss on disposal of tangible capital assets	(643)	(1,380)
Services provided without charge by other government departments and agencies (Note 19)	(99,578)	(94,998)
Transition payments for implementing salary payments in arrears (Note 15)	11,358	–
Impairment in value of equity investments	–	(23)
Other adjustments to tangible capital assets	213	807
Variations in Consolidated Statement of Financial Position:		
Increase (decrease) in accounts receivable	6,299	(378)
Increase in inventory for resale	665	84
Decrease in prepaid expenses	(1,339)	(1,714)
Increase (decrease) in inventory for consumption	9	(155)
(Increase) decrease in accounts payable and accrued liabilities	(22,348)	26,470
Decrease in vacation pay and compensatory leave	85	1,151
Decrease in lease inducements	2,148	2,148
Decrease in deferred revenue	766	1,478
Decrease in employee future benefits	15,213	15,078
Cash used in operating activities	**(742,329)**	**(665,897)**
CAPITAL INVESTING ACTIVITIES		
Acquisitions of tangible capital assets	65,613	58,732
Proceeds from disposal of tangible capital assets	(193)	(1,497)
Cash used in capital investing activities	**65,420**	**57,235**
INVESTING ACTIVITIES		
Income from endowment fund investments	(54)	(44)
Awards granted from endowment fund	278	292
(Decrease) increase in CNIF cash and investments	(63)	(282)
Cash used in investing activities	**161**	**(34)**
FINANCING ACTIVITY		
Lease payments for tangible capital assets	–	(1)
Cash used in financing activity	**–**	**(1)**
Net cash provided by Government of Canada	**723,188**	**(718,189)**

The accompanying notes form an integral part of these consolidated financial statements.